AMENDMENTS TO THE CLAIMS

Please replace all prior versions, and listings, of claims in the application with the following list of claims:

1. (Previously Presented) Optical fiber apparatus, comprising:

an optical fiber having a first section and a second section coupled to the first section, the first section having a gain medium including a first active material and the second section having a gain medium including a second active material;

a first reflector disposed in the first section of the optical fiber, the first reflector being configured to reflect substantially all energy impinging thereon at a first wavelength;

a second reflector disposed in the optical fiber outside the first section of the optical fiber, the second reflector being configured to reflect substantially all energy impinging thereon at the first wavelength; and

a third reflector disposed in the optical fiber, the third reflector being configured to partially reflect energy impinging thereon at a second wavelength different than the first wavelength.

2. (Previously Presented) The optical fiber apparatus of claim 1, wherein the first active material is the same as the second active material.

3. (Previously Presented) The optical fiber apparatus of claim 1, wherein the first active material is different than the second active material.

4. (Previously Presented) The optical fiber apparatus of claim 3, wherein the first and second sections are spliced together.

5. (Previously Presented) The optical fiber apparatus of claim 3, wherein the first reflector comprises a fiber Bragg grating.

6. (Previously Presented) The optical fiber apparatus of claim 4, wherein the second reflector comprises a fiber Bragg grating.

7. (Previously Presented) The optical fiber apparatus of claim 6, wherein the first active material comprises GeO_2.

8. (Previously Presented) The optical fiber apparatus of claim 7, wherein the second active material comprises P_2O_5.

9. (Previously Presented) The optical fiber apparatus of claim 3, wherein the second reflector comprises a fiber Bragg grating.

10. (Previously Presented) The optical fiber apparatus of claim 3, wherein the first active material comprises GeO_2.

11. (Previously Presented) The optical fiber apparatus of claim 10, wherein the second active material comprises P_2O_5.

12. (Previously Presented) The optical fiber apparatus of claim 3, wherein the first active material comprises P_2O_5.

13. (Previously Presented) The optical fiber apparatus of claim 3 wherein the fiber comprises a Raman laser or amplifier and wherein the fiber further comprises a fourth reflector disposed in the optical fiber between said first and second reflectors, the fourth reflector configured to reflect substantially all energy impinging thereon at the second wavelength.

14. (Previously Presented) The optical fiber apparatus of claim 3, wherein the third reflector comprises a fiber Bragg grating.

15. (Previously Presented) The optical fiber apparatus of claim 3, wherein the third reflector is disposed outside the first section of the optical fiber.

16. (Previously Presented) The optical fiber apparatus of claim 15, wherein the third reflector is between the first and second reflectors.

17. (Previously Presented) The optical fiber apparatus of claim 13, wherein a length of fiber of the first section having the first active material and a length of fiber of the second section having the second active material are interposed between said first and second reflectors.

18. (Previously Presented) The optical fiber apparatus of claim 3, wherein the first and second sections are spliced together.

19. (Previously Presented) The optical fiber apparatus of claim 3, further comprising a fourth reflector disposed in the optical fiber.

20. (Previously Presented) The optical fiber apparatus of claim 19, wherein the fourth reflector comprises a fiber Bragg grating.

21. (Previously Presented) The optical fiber apparatus of claim 19, wherein the fourth reflector is disposed outside the first section of the optical fiber.

22. (Previously Presented) The optical fiber apparatus of claim 21, wherein the fourth reflector is between the first and third reflectors.

23. (Previously Presented) The optical fiber apparatus of claim 19, wherein the fourth reflector is configured to reflect substantially all energy impinging thereon at the second wavelength.

24. (Previously Presented) The optical fiber apparatus of claim 19, wherein the fourth reflector is disposed in the first section of the optical fiber.

25. (Previously Presented) The optical fiber apparatus of claim 19, wherein the first and second sections are spliced together.

26. (Previously Presented) The optical fiber apparatus of claim 19, further comprising a fifth reflector disposed in the optical fiber.

27. (Previously Presented) The optical fiber apparatus of claim 26, wherein the fifth reflector comprises a fiber Bragg grating.

28. (Previously Presented) The optical fiber apparatus of claim 26, wherein the fifth reflector is disposed in the first section of the optical fiber.

29. (Previously Presented) The optical fiber apparatus of claim 28, wherein the fifth reflector is between the first and fourth reflectors.

30. (Previously Presented) The optical fiber apparatus of claim 26, wherein the fifth reflector is configured to reflect substantially all energy impinging thereon at a wavelength different than the first wavelength.

31. (Previously Presented) The optical fiber apparatus of claim 26, wherein the first and second sections are spliced together.

32. (Previously Presented) Optical fiber apparatus, comprising:

an optical fiber having a first section and a second section coupled to the first section, the first section having a gain medium including a first active material and the second section having a gain medium including a second active material;

a first reflector disposed in the first section of the optical fiber, the first reflector being configured to reflect substantially all energy impinging thereon at a first wavelength;

a second reflector disposed in the optical fiber outside the first section of the optical fiber, the second reflector being configured to reflect substantially all energy impinging thereon at the first wavelength;

a third reflector disposed in the optical fiber, a fourth reflector disposed in the optical fiber and a fifth reflector disposed in the optical fiber; and

a suppressor disposed in the optical fiber, the suppressor being capable of substantially suppressing the propagation of energy within the optical fiber at a wavelength corresponding to a higher order Raman shift wavelength than the first wavelength.

33. (Previously Presented) The optical fiber apparatus of claim 32, wherein the suppressor is disposed in the first section of the optical fiber.

34. (Previously Presented) The optical fiber apparatus of claim 33, wherein the suppressor is between the first and fifth reflectors.

35. (Previously Presented) The optical fiber apparatus of claim 32, wherein the suppressor comprises a long period grating.

36. (Previously Presented) The optical fiber apparatus of claim 32, wherein the first and second sections are spliced together.

37. (Previously Presented) The optical fiber apparatus of claim 32, wherein the first active material comprises GeO_2.

38. (Previously Presented) The optical fiber apparatus of claim 37, wherein the second active material comprises P_2O_5.

39. (Previously Presented) The optical fiber apparatus of claim 32, wherein the second active material comprises P_2O_5.

40. (Previously Presented) The optical fiber apparatus of claim 41, further comprising a third reflector disposed in the first section of the optical fiber and between the first and second reflectors, the third reflector being configured to reflect substantially all energy impinging thereon at a second wavelength different than the first wavelength.

41. (Previously Presented) Optical fiber apparatus, comprising:

an optical fiber having a first section and a second section coupled to the first section, the first section having a gain medium including a first active material and the second section having a gain medium including a second active material;

a first reflector disposed in the first section of the optical fiber, the first reflector being configured to reflect substantially all energy impinging thereon at a first wavelength;

a second reflector disposed in the optical fiber outside the first section of the optical fiber, the second reflector being configured to reflect substantially all energy impinging thereon at the first wavelength; and

a suppressor disposed in the first section of the optical fiber and between the first and second reflectors, the suppressor being capable of substantially suppressing the propagation of energy within the optical fiber at a wavelength corresponding to a higher order Raman shift wavelength than the first wavelength.

42. (Previously Presented) The optical fiber apparatus of claim 41, wherein the suppressor comprises a long period grating.

43. (Previously Presented) The optical fiber apparatus of claim 3, wherein the first and second sections of the optical fiber are contiguous.

44. (Previously Presented) The optical fiber apparatus of claim 3, wherein the fiber is configured to be a fiber laser.

45. (Previously Presented) The optical fiber apparatus of claim 3, wherein the fiber is configured to be a fiber amplifier.

46. (Previously Presented) The optical fiber apparatus of claim 41 wherein said first active material is different than said second active material.

47. (Previously Presented) The optical fiber apparatus of claim 46 comprising a third reflector configured to reflect energy impinging thereon having a second wavelength that is different than the first wavelength.

48. (Previously Presented) The optical fiber apparatus of claim 47 wherein the third reflector is between the first and second reflectors and is configured to reflect substantially all energy impinging thereon at the second wavelength.

49. (Previously Presented) The optical fiber apparatus of claim 47 wherein the third reflector is configured to partially reflect energy impinging thereon at the second wavelength.

50. (Previously Presented) The optical fiber apparatus of claim 46 wherein the first and second sections are coupled by a lens.

51. (Previously Presented) The optical fiber apparatus of claim 47 comprising a fourth reflector disposed in the optical fiber between said first and second reflectors, the fourth reflector configured to reflect substantially all energy impinging thereon at the second wavelength.

52. (Previously Presented) The optical fiber apparatus of claim 51, wherein fiber of the second section having said second active material is interposed between the third and fourth reflectors and has a first length and wherein if any fiber of the first section having said first active material is interposed between the third and fourth reflectors the length of such fiber is less than the first length.

53. (Previously Presented) Optical fiber apparatus, comprising:

an optical fiber having a first section and a second section coupled to the first section, the first section having a gain medium including a first active material and the second section having a gain medium including a second active material different than the first active material;

a first reflector disposed in the optical fiber, the first reflector being configured to reflect substantially all energy impinging thereon at a first wavelength;

a second reflector disposed in the optical fiber, the second reflector being configured to reflect substantially all energy impinging thereon at the first wavelength;

a third reflector disposed in the optical fiber, the third reflector being configured to partially reflect energy impinging thereon at a second wavelength different than the first wavelength; and

a fourth reflector disposed in the optical fiber and between the first and third reflectors, the fourth reflector being configured to reflect substantially all energy impinging thereon at the second wavelength.

54. (Previously Presented) The optical fiber apparatus of claim 53, further comprising a fifth reflector in the optical fiber and between the first and fourth reflectors, the fifth reflector being configured to reflect substantially all energy impinging thereon at a third wavelength different than the first and second wavelengths.

55. (Previously Presented) The optical fiber apparatus of claim 54, further comprising a suppressor in the optical fiber and between the first and fifth reflectors, the suppressor being capable of substantially suppressing the propagation of energy within the optical fiber at a wavelength corresponding to a higher order Raman shift wavelength than the first wavelength.

56. (Previously Presented) The optical fiber apparatus of claim 55, wherein the first active material comprises P_2O_5.

57. (Previously Presented) The optical fiber apparatus of claim 55, wherein the first active material comprises GeO_2.

58. (Previously Presented) The optical fiber apparatus of claim 57, wherein the second active material comprises P_2O_5.

59. (Previously Presented) The optical fiber apparatus of claim 58, wherein the first and second sections of the optical fiber are spliced together.

60. (Previously Presented) The optical fiber apparatus of claim 58, wherein the first and second sections of the optical fiber are contiguous.

61. (Previously Presented) The optical fiber apparatus of claim 53, further comprising a suppressor in the optical fiber and between the first and fifth reflectors, the suppressor being capable of substantially suppressing the propagation of energy within the optical fiber at a wavelength corresponding to a higher order Raman shift wavelength than the first wavelength.

62. (Previously Presented) The optical fiber apparatus of claim 53, wherein the first active material comprises GeO_2.

63. (Previously Presented) The optical fiber apparatus of claim 62, wherein the second active material comprises P_2O_5.

64. (Previously Presented) The optical fiber apparatus of claim 53, wherein the first active material comprises P_2O_5.

65. (Previously Presented) The optical fiber apparatus of claim 64, wherein the second active material comprises GeO_2.

66. (Previously Presented) The optical fiber apparatus of claim 53, wherein the first and second sections of the optical fiber are spliced together.

67. (Previously Presented) The optical fiber apparatus of claim 53, wherein the first and second sections of the optical fiber are contiguous.

68. (Previously Presented) The optical fiber apparatus of claim 53, wherein the fiber is configured to be a fiber laser.

69. (Previously Presented) The optical fiber apparatus of claim 53, wherein the fiber is configured to be a fiber amplifier.

70. (Currently Amended) A fiber system, comprising:

an energy source capable of emitting energy at a pump wavelength; and

a fiber, comprising:

an optical fiber having a first section and a second section coupled to the first section, the first section having a gain medium including a first active material and the second section having a gain medium including a second active material different than the first active material;

a first reflector disposed in the optical fiber, the first reflector being configured to reflect substantially all energy impinging thereon at a first wavelength;

a second reflector disposed in the optical fiber, the second reflector being configured to reflect substantially all energy impinging thereon at the first wavelength;

a third reflector disposed in the optical fiber, the third reflector being configured to partially reflect energy impinging thereon at a second wavelength different than the first wavelength; ~~and~~

a fourth reflector disposed in the optical fiber and between the first and third reflectors, the fourth reflector being configured to reflect substantially all energy impinging thereon at the second wavelength; and

wherein the energy source and the optical fiber are configured so that energy at the pump wavelength emitted by the energy source can be coupled into the optical fiber.

71. (Previously Presented) The system of claim 70, wherein the energy source comprises a laser.

72. (Previously Presented) The system of claim 71, wherein the energy source is capable of lasing at the pump wavelength.

73. (Original) The system of claim 70, wherein the fiber is configured to be a fiber laser.

74. (Original) The system of claim 70, wherein the fiber is configured to be a fiber amplifier.

75. (Previously Presented) Optical fiber apparatus, comprising:

an optical fiber having N sections, the N sections being coupled together, at least one of the N sections of the optical fiber having a gain medium with an active material; and

a plurality of reflectors disposed in the optical fiber, said plurality including two reflectors having respective wavelengths at which each is configured to reflect substantially all of the energy impinging thereon and wherein said respective wavelengths can be the same or can be different;

wherein N is an integer having a value of at least three;

said N sections comprising a first section with an end and configured to receive energy at a wavelength λ_p, the first section of the optical fiber having a first reflector of said two reflectors disposed therein, the wavelength at which the first reflector is configured to reflect substantially all energy impinging thereon comprising λ_{s1}, where $\lambda_{s1}^{-1} = \lambda_p^{-1} - \lambda_{r1}^{-1}$, and (c/λ_{r1}) is the Raman Stokes shift frequency for an active material in a gain medium in the first section of the optical fiber, and c is the speed of light;

wherein said N^{th} section comprises an end opposite the end of the first section, the N^{th} section of the optical fiber having the second reflector of said two reflectors disposed therein, the wavelength at which said second reflector is configured to reflect substantially all energy impinging thereon comprising λ_{s1n}, where for the N^{th} section $\lambda_{s1n}^{-1} = \lambda_{s1(n-1)}^{-1} - \lambda_{rn}^{-1}$, where n=N and (c/λ_{rn}) is the Raman Stokes shift frequency for an active material in a gain medium in the N^{th} section of the optical fiber and wherein the $(N-1)^{th}$ section creates energy having the wavelength $\lambda_{s1(n-1)}$; and

wherein said optical fiber includes a third reflector disposed in the N^{th} section of the optical fiber, the third reflector being configured to partially reflect energy impinging thereon at the wavelength λ_{s1n}.

76. (Previously Presented) The optical fiber apparatus of claim 87, wherein, for at least one of the m^{th} sections, the other reflector configured to reflect energy at the wavelength $\lambda_{s1(m-1)}$ is disposed in the m^{th} section.

77. (Previously Presented) The optical fiber apparatus of claim 75, wherein N is four.

78. (Previously Presented) The optical fiber apparatus of claim 75, wherein N is five.

79. (Previously Presented) The optical fiber apparatus of claim 75, wherein N is six.

80. (Previously Presented) The optical fiber apparatus of claim 75, wherein at least two of the N sections of the optical fiber have a gain medium with an active material.

81. (Previously Presented) The optical fiber apparatus of claim 80, wherein the active material in one of the at least two of the N sections of the optical fiber is different than an active material of another of the N sections of the optical fiber having a gain medium.

82. (Previously Presented) The optical fiber apparatus of claim 75, wherein each of the N sections of the optical fiber have a gain medium with an active material.

83. (Previously Presented) The optical fiber apparatus of claim 87, wherein, for at least one of the m^{th} sections, the other reflector configured to reflect energy at the wavelength $\lambda_{s1(m-1)}$ is disposed outside of the m^{th} section.

84. (Previously Presented) The optical fiber apparatus of claim 89, wherein, for at least one of the m^{th} sections, the other reflector configured to reflect energy at the wavelength $\lambda_{s1(m-1)}$ is disposed in the m^{th} section.

85. (Previously Presented) The optical fiber apparatus of claim 89, wherein, for at least one of the m^{th} sections, the other reflector configured to reflect energy at the wavelength $\lambda_{s1(m-1)}$ is disposed outside of the m^{th} section.

86. (Previously Presented) The optical fiber apparatus of claim 75, wherein the N^{th} section of the optical fiber has an additional reflector disposed therein, the additional reflector being configured to reflect substantially all energy impinging thereon at the wavelength $\lambda_{s1(n-1)}$, where $\lambda_{s1(n-1)}^{-1} = \lambda_{s1(n-2)}^{-1} - \lambda_{r(n-1)}^{-1}$, and $(c/\lambda_{r(n-1)})$ is the Raman Stokes shift frequency for the active

material in the $(N-1)^{th}$ section of the fiber and the $(N-2)^{th}$ section creates energy at the wavelength $\lambda_{s1(n-2)}$.

87. (Previously Presented) The optical fiber apparatus of claim 86, wherein for each of the remaining sections of the optical fiber, the remaining sections being those other than the first and N^{th} sections and being individually designated by the index m, the fiber has two reflectors disposed therein, one of the reflectors being disposed in the m^{th} section of the optical fiber and being configured to reflect substantially all energy impinging thereon at a wavelength λ_{s1m}, where $\lambda_{s1m}^{-1} = \lambda_{s1(m-1)}^{-1} - \lambda_{rm}^{-1}$, and (c/λ_{rm}) is the Raman Stokes shift frequency for an active material in the m^{th} section of the fiber and the other reflector being configured to reflect energy at the wavelength $\lambda_{s1(m-1)}$ and λ_{s11} represents the same wavelength as λ_{s1}.

88. (Currently Amended) The optical fiber apparatus of claim 53, wherein fiber of the second section having said second active material is interposed between the third and fourth reflectors and has a[[s]] first length wherein if any fiber of the first section having said first active material is interposed between the third and fourth reflectors the length of such fiber is less than the first length.

89. (Previously Presented) The optical fiber apparatus of claim 75, wherein for each of the remaining sections of the optical fiber, the remaining sections being those other than the first and N^{th} sections and being individually designated by the index m, the fiber has two reflectors disposed therein, one of the reflectors being disposed in the m^{th} section of the optical fiber and being configured to reflect substantially all energy impinging thereon at a wavelength λ_{s1m}, where $\lambda_{s1m}^{-1} = \lambda_{s1(m-1)}^{-1} - \lambda_{rm}^{-1}$, and (c/λ_{rm}) is the Raman Stokes shift frequency for an active material in the m^{th} section of the fiber and the other reflector being configured to reflect energy at the wavelength $\lambda_{s1(m-1)}$ and λ_{s11} represents the same wavelength as λ_{s1}.

90. (Previously Presented) The optical fiber apparatus of claim 88, wherein a length of fiber of the first section having the first active material and a length of fiber of the second section having the second active material are interposed between said first and second reflectors.

91. (Previously Presented) The optical fiber apparatus of claim 75, wherein the fiber is configured to be a fiber laser.

92. (Previously Presented) The optical fiber apparatus of claim 75, wherein the fiber is configured to be a fiber amplifier.

93. (Previously Presented) A fiber system, comprising:

an energy source; and

the optical fiber apparatus as recited in claim 75, said energy source coupled to the optical fiber apparatus.

94. (Original) The system of claim 93, wherein the fiber is configured to be a fiber laser.

95. (Original) The system of claim 93, wherein the fiber is configured to be a fiber amplifier.

96. (Previously Presented) A fiber laser or amplifier, comprising:

an optical fiber having at least first and second sections coupled together, the first section having a first gain medium with a first active material, the second section having a second gain medium with a second active material that is different than the first active material, the optical fiber being configured to be capable of receiving energy at a first wavelength and to be capable of outputting energy at a second wavelength longer than the first wavelength; and

a plurality of reflectors disposed in the optical fiber, the plurality of reflectors being configured so that energy propagating in the optical fiber at the first wavelength undergoes at least one Raman Stokes shift to create energy in the optical fiber at the second wavelength, and so that, when the optical fiber receives energy at the first wavelength, a power output by the optical fiber at the second wavelength is at least about 55% of a power of the energy the optical fiber receives at that first wavelength.

97. (Previously Presented) The fiber laser of claim 96, wherein the plurality of reflectors comprises first and second reflectors each configured to reflect substantially all energy impinging thereon at a selected wavelength.

98. (Previously Presented) The fiber laser of claim 96, comprising a third reflector disposed in the optical fiber between the first and second reflectors.

99. (Original) The fiber laser of claim 96, wherein energy propagating in the optical fiber at the first wavelength undergoes at least two Raman Stokes shifts to create energy in the optical fiber at the second wavelength.

100. (Previously Presented) The fiber laser of claim 96, wherein, when the optical fiber receives energy at the first wavelength, a power output by the optical fiber at wavelengths other than the first and second wavelengths is at most about 45% of the power of the energy the optical fiber receives at that first wavelength.

101. (Original) The fiber laser of claim 96, wherein the first and second sections are directly coupled together.

102. (Original) The fiber laser of claim 96, wherein the first and second sections are spliced together.

103. (Original) The fiber laser of claim 96, wherein energy propagating in the optical fiber at the first wavelength undergoes a Raman Stokes shift based interaction with the active material contained in the gain medium of the first section of the optical fiber to form energy at a first intermediate wavelength, and energy at the first intermediate wavelength undergoes a Raman Stokes shift based on interaction with the active material contained in the gain medium of the second section of the optical fiber to form a second intermediate wavelength.

104. (Original) The fiber laser of claim 103, wherein the second intermediate wavelength is the same as the second wavelength.

105. (Original) The fiber laser of claim 103, wherein energy propagating in the optical fiber at the second intermediate wavelength undergoes additional Raman Stokes shifts to form energy at the second wavelength.

106. (Previously Presented) Optical apparatus, comprising:

a Raman fiber laser or amplifier for lasing or providing amplification responsive to receiving energy having a pump wavelength λ_p, said Raman fiber laser or amplifier comprising an optical fiber having a plurality of sections, with at least two of the plurality of sections having Raman gain media containing different active materials for creating Stoke-shifted energy, said Raman fiber laser or amplifier further including a first reflector configured to reflect energy impinging thereon at the wavelength λ_{s1}, where $\lambda_{s1}^{-1} = \lambda_p^{-1} - \lambda_{r1}^{-1}$, and (c/λ_{r1}) is the Raman Stokes shift frequency for one of the different active materials, and c is the speed of light.

107. (Previously Presented) The optical apparatus of claim 106 comprising a second reflector, said second reflector being configured to reflect energy impinging thereon at the wavelength λ_{s1}.

108. (Currently Amended) The optical apparatus ~~article~~ of claim 107 wherein each of said first and second reflectors is configured to reflect substantially all of the energy impinging thereon at λ_{s1}.

109. (Previously Presented) The optical apparatus of claim 107 comprising a third reflector, said third reflector being configured to reflect energy impinging thereon at a wavelength different than λ_{s1}.

110. (Previously Presented) The optical apparatus of claim 106 comprising a second reflector being configured to reflect energy impinging thereon at the wavelength λ_{s1}, said first and second reflectors to be referred to as a first pair of reflectors, said optical apparatus further comprising a second pair reflectors, each reflector of said second pair being configured to reflect energy impinging thereon at the wavelength λ_{s12}, where $\lambda_{s12}^{-1} = \lambda_{s1}^{-1} - \lambda_{r2}^{-1}$, and (c/λ_{r2}) is the

Raman Stokes shift frequency for the other of the different active materials, and c is the speed of light.

111. (Previously Presented) The optical apparatus of claim 110 wherein fiber comprising one of said different active materials is not interposed between reflectors of one of said pairs of reflectors.

112. (Previously Presented) The optical apparatus of claim 110 wherein a length of fiber comprising one of said different active materials and a length of fiber comprising the other of said different active materials are interposed between the reflectors of one of said pairs of reflectors.

113. (Previously Presented) The optical apparatus of claim 110 wherein fiber comprising one of said different active materials is not interposed between reflectors of the other of said pairs of reflectors.

114. (Previously Presented) The optical apparatus of claim 112 wherein a selected length of fiber comprising one of said different materials is interposed between the reflectors of the other pair of reflectors.

115. (Previously Presented) The optical apparatus of claim 114 wherein if any length of fiber comprising the other of said different materials is interposed between the reflectors of said other pair of reflectors, such length is less than said selected length.

116. (Previously Presented) The optical apparatus of claim 110 wherein one of said reflectors of said second pair is located between said reflectors of said first pair.

117. (Previously Presented) The optical apparatus of claim 116 wherein each of said reflectors of said first pair is configured to reflect substantially all of the energy impinging thereon at the wavelength λ_{s1}.

118. (Previously Presented) The optical apparatus of claim 117 wherein each of said reflectors of said second pair is configured to reflect substantially all of the energy impinging thereon at the wavelength λ_{s2}.

119. (Previously Presented) The optical apparatus of claim 110 wherein one of said different active materials comprises GeO_2.

120. (Previously Presented) The optical apparatus of claim 110 wherein one of said different active materials comprises P_2O_5.

121. (Previously Presented) The optical apparatus of claim 120 wherein the other of said different active materials comprises GeO_2.